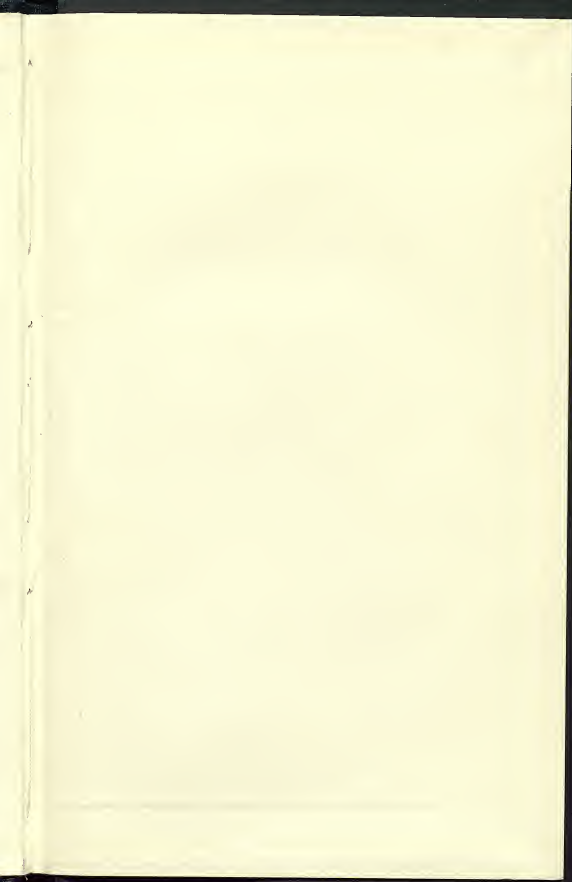


PERKINS
AGRICULTURAL LIBRARY

UNIVERSITY COLLEGE
SOUTHAMPTON

SOUTHAMPTON
UNIVERSITY LIBRARY

BOOK NUMBER	59-680473
CLASS MARK	SF 375
	Perkins







PRACTICAL ESSAY

ON THE

TREATMENT OF EWES.

B 55

A
PRACTICAL ESSAY
ON THE
TREATMENT OF EWES,
IN THE
LAMBING SEASON;

WITH
PARTICULAR DIRECTIONS ON THE SUBJECT OF
MANUAL ASSISTANCE IN DIFFICULT CASES:
WRITTEN WITH A VIEW TO PREVENT THE HEAVY LOSSES THAT
TOO FREQUENTLY OCCUR.

BY
THE EDITOR OF THE FARMERS' JOURNAL.

LONDON:
PRINTED AND PUBLISHED BY EVANS AND RUFFY, AT THE AGRICULTURAL
PRESS, 29, BUDGE ROW, AND MAY BE HAD OF ALL
BOOKSELLERS.

Price One Shilling and Sixpence.

—
1819.



INTRODUCTION.

THE very heavy and frequent losses which happen among ewes in lambing-time, have been considered as depending upon some incomprehensible particulars relating to the season, the weather, or the condition of the flock; and some shepherds think, that when once they begin to die, the disease is catching. The losses are certainly much greater in some years than others, and, therefore, the flock owners always hope to escape favourably:—hence come the phrases, “We have been very *lucky* this year;” or “We have had very *bad luck* :” meaning, in the former case, that they have not lost more than five,—and, in the latter, that they lost from ten to twenty in the hundred. This very serious amount of loss, it is confidently believed, may be considerably alleviated, as the author of this essay has personally attended upon breeding ewes (his

own flock) for sixteen years, and has not lost more than one and a half per cent. by all the accidents of the lambing season during the whole period. As there was no season during this period, but he heard, among his neighbours, complaints of *ill luck*, he is the more persuaded that the methods of treatment are often improper, and that his own practices and observations may be worth communicating.

Concerning the disease of which the ewes generally die, very little need be said: it is a gangrene, or mortification of the parts, called, locally, *garget*, or *gargass*. It takes place sometimes externally, from the bruises occasioned, in which cases preventive applications are not wholly useless; but more frequently its origin is internal, occasioned by the over-heating and too great exertion of the ewe. In these latter cases, it can neither be prevented nor cured by the application of any oils, &c. Its approach is generally known by the ewe being dull and solitary on the second day; on the following morning, instead of eating, she wanders as if she wanted to lamb, and lies down to *pain*: these never recover. Whether external or internal, the smell or stench is the same, and the mortification rapid.

The principal object of this essay is to shew, that these latter cases are to be prevented, not by dressing or drenching, but by timely and judicious

assistance. Incident to this object will be shewn the importance of proper handling, in all cases where straitness of the passage* would have occasioned the ewe great exertion and fatiguing labour. The subject has probably never been considered upon this principle; but the author is warranted in ascribing his uniform success to his constant observance of it.

The method of procedure in difficult cases, besides that it is almost always too long delayed, has been left to custom, and propagated by habit from generation to generation. Persons ignorant of letters, though often sagacious, are generally opinionated; they resist instruction, because they have not been used to reason, and they have no access to science to awaken reflection and improve their knowledge. What they have learned by habit, they cannot conceive to be wrong; and having observed a mixture of fortunate and fatal results in natural and in dangerous cases, and especially noticing that far the greater proportion of deaths frequently happen among the ewes that have not been handled, they give up the cause as a puzzle, and remain convinced, that as no care (they believe) was wanting, so no skill or knowledge could have ensured better success.

* In shepherd's language—the *bearing*; frequently pronounced—*barren*.

It is hoped, that, in the following essay, some of these doubts may be explained, and the seeming mystery cleared up. If this should appear to be the case, and flock-owners will employ their knowledge and exert their authority, the practices referred to may be considerably improved, and the safety of their flocks materially promoted.

ESSAY.

PRACTICAL instructions on manual assistance in difficult parturition must necessarily be conveyed in familiar language; and it fortunately happens, that there is a decency of terms common in this respect, which, without having recourse to those which are scientific, will render the subject sufficiently intelligible without being disgusting.

On the management of ewes, during the period of lambing, as to food and shelter, breeders have not much to learn; and the methods which are commonly followed, though perhaps they vary considerably, will not be readily changed, especially in large flocks. The general instructions which follow, in regard to shelter, food, &c. are such as were observed in that uniform success which has been spoken of; and as much of them may be adopted as may be found convenient, or as

may seem indispensable to the particular directions included. In sketching the general management, perhaps the greater part of attentive breeders will see only a copy of their own reflections, and of the particulars acknowledged and known to shepherds in most places. For the sake of method, we may divide the subject into heads, and begin with the rutting season, at which time such steps must be taken by those who have numerous flocks, as will facilitate the business at lambing-time, by means of

SEPARATION.

In large flocks it is proper to rub the rams under the breast every day with ochre, in order that the ewes may be divided into WEEKS; in which case, if the flock consist of four hundred, and the rutting season be limited to four weeks, shelter and conveniences are only necessary for one hundred ewes. This may appear an idle remark to those who are accustomed to lamb six or eight hundred in a large field, but will serve to introduce some observations on the important subject of

SHELTER.

Without endeavouring to guess how the ewes are managed in this respect in different places,

the author thinks it necessary to observe, that his ewes were always enclosed on nights, so that they might be regularly watched, and easily seen and attended to. For this purpose, some breeders have a permanent pen in a large pasture, near to which there are some boarded sheds for particular shelter, when wanted. This is placed as convenient as may be to the farm-house, that those who watch them may see them every hour (if very cold) or every two hours, if mild and fine. The author's method (which he thinks much preferable to a pen of naked rails) was to make a temporary enclosure in the following manner:—Take a sufficient number of light *trays* (or *folding hurdles*) and make a square enclosure, by placing a double row of them at a foot apart, and stuffing the interstice with stubble or old thatch, or any straw which the ewes will not eat. These being carefully set in the sward, stuffed, and tied at top, will make a warm and private enclosure; for, in an open pen, every thing that approaches in the night alarms the ewes.—The next thing is to divide the pen, according to its size, into a number of compartments, by running similar stuffed fences from the sides towards the centre, leaving always a passage at the middle to each. Lastly, in several places at the corners, construct what are locally called *hulks*, by placing one pair of hurdles (stuffed) parallel to one side, and touching



the end; over which a single hurdle is to be laid, and straw upon it. Doors to these may be made of light board, or with a hurdle *hedged*. The door that leads into this enclosure is also to be closed with *hedging*, or platted straw, or some other contrivance, for privacy and shelter. This preparation was always made in the same pasture and in the same place, that the older ewes might, by use, draw the younger ones to it; and thus less forcing and fatigue would be necessary in bringing them together. But they will generally come to it of themselves towards night, if they be properly managed in regard to

FOOD.

Within this shelter, and in every compartment of it, was placed a trough, in which a little bran and oats, or cut greens or turnips, or sometimes a little cut hay or clover sprinkled with salt, was put each evening. The ewes being accustomed to find a little enticing food in the pen, inclined towards it as a desirable home, and grew familiar and fearless: this made them settle and rest; it gave them strength, and wonted them to their lair.

With regard to the supply of food at large, as it is obvious that a moderate sized close could not afford pasture for four or five hundred ewes in succession for a month or five weeks, they must

be supposed to have a supply of Swedish turnips cut on the ground every day, or Scotch-kale, or other greens, as required. But as it is highly proper that all those that have lambed should be daily drawn off from the rest, the pasture is really burthened with but about half the apparent number. To put those which have lambed with those which are about to lamb, creates confusion and uneasiness; sometimes ewes will put off their pains, and sometimes the lambs will get intermingled, and be rejected by both dams. On this account it is necessary, whether the weather be cold or not, for the shepherd to put those ewes in the *hulks*, for concealment, which lamb in the night.

CLEANLINESS.

This is an important matter; and whether there be one hundred or several hundred in succession, the pen must be kept sweet. Clean litter is indispensable, and no small quantity of valuable manure will be collected. The pen ought to have a small quantity of fresh litter strewed about it every night,—and as the sides of the shelter are low, it might not be amiss to clean it thoroughly out every week. Nothing will attract the ewes to the pen, if it be dirty with their own dung and urine; neither will they eat with appetite, nor rest quietly in it. As a part of this

management, all the *cleanings** should be carefully thrown away, and even be gathered off the field where they happen to drop, for otherwise they entice the crows. Dead lambs must be removed before they are skinned; and if an ewe be seized with the *garget*, she should be taken away even before she be dead. Shepherds have a rule, that those who handle the ewes should never skin such as mortify; and this is certainly worth observing, for all bad smells, and all probability of taint, should be avoided.

CONDITION.

Before proceeding to the difficult cases, it may not be amiss to speak of the condition of the ewes as to mutton. Had the object been a regular treatise, this head must have been taken first into consideration, because there are various opinions as to the condition in which breeding ewes should be kept; and it is usual to impute all ill-success to this in late lambings, or in open winters and early springs. The experience of the author does not warrant this conclusion; and although the cunning question, which is usually put in this case,—“Whether ewes had better be too fat, or too poor,”—is not easily answered, yet it is certain that they had better be *strong* than *weak*.

* The *afterbirth*.

It is a good practice to make some improvement in their keeping, if the spring be cold, a fortnight before they lamb.

But some good may be derived from the notion that ewes are in more danger when they are *fresh** than when they are rather poor; because it may incite the shepherd to more vigilance, and enforce the care and practice hereafter recommended. To this end, an instance may be related which happened under the eye of the author, and which argues to both purposes.

A neighbour, who had for many years left off breeding sheep, was induced to put half a score very good shearling Leicesters to a favourite ram: they were put to rather late, and being rutted in company with four score belonging to the person who hired the ram, they lambed slowly and unexpectedly. The spring was fine, and grass forward; the ewes were select individuals out of a lot of well-bred theaves that had been bought in, and were in forward condition. The facts in this case are all we have to do with. Either five or six of these died in lambing, and they all lambed without being handled. Whether they were all *seen* in the act of lambing, is not material; they were left to *nature*, and they all got shut of their lambs, whether their pains were

* A technical term for *good condition*.

long and severe, or otherwise; and at least half of them died.

The author's ewes, of all ages, were lambing at the same time, and the fields very near together. They were watched by day and night, and no one suffered to be more than half an hour *busy*, without being examined and assisted; and not one was lost. From these cases (and the success here noted having been always founded on like management) it appears reasonable to attribute considerable importance to

EARLY ASSISTANCE.

The general rules about following *nature*, and leaving *nature to herself*, have been misunderstood; and it can never do harm (if the author may trust his own experience) to examine the ewes which have had reasonable time allowed. By far the greater part of the deaths happen to ewes that have not been handled, and in all these cases *the malady originates from within*. Also, it is to be suspected, when an ewe is long busy without making an end, that the lamb is in some way wrong; or, at least, that the passage is too strait. In every such case, delay aggravates the danger; for when much assistance is necessary that has been long called for, the ewes seldom recover.

But, on the other hand, however much handling be requisite, that is performed at first, (as the bruise is entirely external, where it may be dressed, and not attended with fever,) not more than one in twenty will be lost in the worst cases.

It is plain, that more difficulty, in regard to straitness, will occur with theaves than with aged ewes; and it need not be remarked, that *room must be made*, either by the paining of the animal or by the hand of the shepherd. The cases being common in which some degree of assistance is necessary among young ewes, the main instruction to be conveyed in this essay will be found in considering the usual and erroneous proceeding when the natural pains cannot deliver the burthen. There may be various degrees of exertion unnoticed, when ultimately the ewes lamb of themselves, and (as it appears) often enough to kill the mother, which might have been prevented. The error of delay, and the errors of treatment, when assistance is afforded, are the occasion of the sum total of the mischief.

WHEN THE PASSAGE IS TOO STRAIT AND THE
LAMB COMES RIGHT.

When shepherds find an ewe in this situation, more or less confined, what should they do but get hold of the foot if they can, and pull?—Per-

haps, although the ewe may have had sufficient time allowed, it may be hardly possible at first to introduce two fingers to reach a foot, and the shepherd, not considering that nature is almost exhausted, lets her go. This is very wrong; a good deal of gentle trying is, in these cases, necessary, and the attempts of the shepherd will excite the pains of the ewe. What she could not do by herself is now presently performed, —that is to say, the head of the lamb is brought within the bones,* and the nose and feet come in sight.

It is to be observed, that until the head is brought forward, no exertion of the ewe can dilate the passage; hence it follows, that when lambs present backwards, there is none of that *wedge shape* that is intended by nature for this purpose, and even aged ewes can seldom lamb alone in this case.

Supposing now the nose will advance nearly to the passage, and the feet can be got hold of, they are not to be pulled out, first one and then the other, and the head left behind. It is manifest, that to pull at the feet can answer no other purpose than to dilate the passage; a necessary purpose certainly, but not to be performed in this manner; because, in pulling with force, the head shrinks back between the shoulders, and is pitched

* The pelvis.

perpendicularly; in which position the *wedge shape* is lost, and the head cannot shoot forward, unless the parts be ruptured by the pulling.

The thing, therefore, to be had in view, is to deliver the lamb as nature presents it; that is to say, the head and feet together. To this end, the fingers must be gradually introduced, so as to press upon the forehead, and the back of the hand forced upwards to dilate the passage. In this way, pulling a little at the feet occasionally, the head will be gradually advanced. The fore-fingers of the right hand must then be introduced in the vent, and the finger and thumb of the left hand must pull *downwards* at the lamb by the under jaw. By interchanging these methods, and using gentle means and patience, the ewe's pains will be encouraged, and the lamb will be safely brought away without any forcible pulling at the feet at all. The author is warranted by extensive experience in saying, that the extremest ease of disproportion may be safely got over in this way, without any forcible pulling. In the worst cases it may be convenient to have an assistant to hold the ewe, which should lie on her right side, with her head raised up.

The injury that is here done will be merely external: it may also be remarked, that where much handling is necessary, something to anoint the hand is generally used. For this purpose nothing

is better than sweet oil, though it is more common to use a little hog's lard, because that is found in every farm-house. Considerable hurt appears to take place in the vent, and bloody faeces are often discharged. It is advisable, therefore, to anoint both passages a little, internally and externally, with the following liniment:—

Take oil (essential) of turpentine ...	$\frac{1}{2}$ a pint.
Whale oil	1 pint.
Sulphuric acid	2 oz.

Mix the oil and turpentine in an earthen vessel; then add the acid by degrees, stirring the mixture till cool. Put it in a bottle when cold. This is not a pungent or stimulating application, but refrigerant and vulnerary. It is an excellent composition of black oils for all inflammations, pinches, cuts, &c. among cattle.* On the second day the dressing may be repeated in the same manner, but nothing given internally is either requisite or useful, unless the ewe is very weak, and the weather very cold, so that she cannot be let out of the shelter, in which case a little thick oatmeal gruel may be put down her throat. But, indeed, very

* Flesh wounds, (whether by horning, or other accidents,) when it is necessary to put a tent in the orifice, should be dressed *externally* with these oils. For inflammatory swellings or bruises, put double the quantity of the sulphuric acid.

little good is ever attained by forcing nourishment on an ewe that wont eat: some advise a little milk-porridge with *gin* in it.* On this the author need only observe, that he never gave it.

The foregoing case is stated at length, as it contains the whole improvement to be inforced. In one word, the lamb must be delivered by the *head*, and not the feet; and where assistance is requisite, it must be applied early. It cannot be known whether it be requisite or not, without examination, therefore the attention must be vigilant; and if the ewes be used to the shelter, and rendered familiar by the feeding and management, it will be at all times easy to catch them, or, if necessary, to drive a few in company to the yard for this purpose. When an ewe wants to lamb, she is inclined to be solitary, and will wander from place to place until she *discharges water*:† upon that place she will settle; and if she does not lamb within half an hour, let her be examined and assisted.

OF CASES WHERE THE LAMBS COME WRONG.

In these cases, every shepherd is obliged to proceed as well as he can, and if there be not such straitness as to render the introduction of the

* See note, p. 29.

† Called, technically, *bursting the bleb*.

hand impracticable, the lamb is at length brought away; but in the worst of them, and where the hand has been long employed, recovery is always doubtful. It is here to be again observed, that the danger is encreased by delay, and in general the difficulty also; first, because if the pains be over, the parts will retract; and secondly, because in some cases the extrusion has proceeded so far that the lamb cannot be put back. This is especially the case if the head presents alone, for if the lamb be large (or the ewe be strait) it will stop at the shoulders; in a short time the lamb will be dead; but whether dead or alive it must be pulled away as it is. It is not less material to remark, that although the lamb comes right, if the ewe cannot lamb it, but has been some hours trying, and the nose and feet have been presented and thrust forward so as to occupy and distend the passage, a swelling of the exterior parts will take place. In this state of increased irritability, as force must still farther dilate the passage, the danger is necessarily greater by the delay. The lamb is also likely to be lost, for the head is generally much enlarged, and sometimes the tongue so much swelled, that if brought away alive it can by no means suck.

Supposing, therefore, the cases to be taken in time, a few general observations on those which are preternatural may suffice: to be minutely

descriptive in these would answer no purpose.—If the nose only presents, it must be put back, and at least one foot obtained. If the tail only presents, (which is not so common,) the lamb must be, in like manner, thrust back, and the hinder feet brought out. If *feet* only present, it must be first distinguished whether they be the fore or hinder ones; because, if the latter, the lamb must be brought away by cautiously pulling at them;—but if the ewe be strait, the passage should be dilated by the hand. On the other hand, if the feet be the fore feet, they must be put back, and the head obtained. If shepherds cannot by any means introduce the hand, in this case they have sometimes skinned the fore legs, and with a cord tied round the foot, pulled the shoulders out, one at a time. Ewes have sometimes recovered after this severe operation; but if they have any mutton that is valuable for family use, it is better to slaughter them, as the lambs may then be saved. These cases are rare, and it is worth remarking that they seldom occur to the young ewes.

Besides these, there are complicated cases where ewes have twins. Sometimes the shepherd feels *three* feet, and nothing else, and sometimes four; sometimes a tail and two feet of another lamb, and now and then two feet only which belong to separate lambs. These cases may always be guessed at by the feet being rather small, indica-

ting, that if the lamb had been right, the ewe would have got shut of it at first. There is, of course, no other remedy but introducing the hand so as to distinguish the parts, and to bring one lamb away. The ewe should be then let alone, and if her natural pains occur, and the other lamb be right, she will lamb it herself, and recover. All these cases are rare, but are attended for the most part with considerable danger. If, however, the operation be performed in time, and the hurt be chiefly external, where the aforesaid dressing can be readily applied and repeated, the greater part may get well.

The whole of this reasoning will apply to heifers as well as young ewes, with this additional observation,—that as calves (the same with foals) often stick hard at the hips, if instead of pulling straight forward, the calf be turned sideways by being grasped in a man's arms, and weighed downwards, it will come away very well. This is the more necessary, as the dams are often upon their legs during the operation.—Let us here not fail to remark the wisdom of nature's laws:—When a cow or a mare, by natural effort, cannot get shut of her burthen past the hips, she rises up; and with this motion the young partly turns, and hangs perpendicularly down, and so drops away. From this we are to remember, that forcible and continued pulling *straight forward* is irrational and improper. That

we are to wait upon and assist nature is true, but we must also imitate her operations in that assistance.

This essay may not improperly be concluded, by relating a circumstance which happened while it was in preparation. A gentleman, who keeps a numerous breeding flock in Romney Marsh, in a conversation with the author on the scour in lambs, dropped some hints on the subject herein treated. It may chance that this essay may fall into his hands, as it may into those of others who may have imbibed the like notions. "If," said he, "we do but touch an ewe at lambing time, if we only *touch her wool*, without pressing or handling her, she will die."—Upon this it is necessary to observe, that the gentleman in question probably never attended any ewes himself, and must therefore have learned so extraordinary an opinion from his shepherd; and it is well known, that all vulgar errors are believed and propagated by illiterate people with wonderful confidence and pertinacity. It may have happened that an ewe which was *only touched* died, and the circumstance appearing marvellous, recommended it to general notice and belief. But many that are *not touched* die; and this being referable to no cause, excites no thought, and is not worthy of inquiry.

The author has to state, in opposition to this, that the foregoing treatment has been his constant practice, and there is not a case stated which he

has not many times experienced. He therefore recommends his observations to the serious consideration of all intelligent breeders, (of whom the gentleman alluded to is one,) in the confident belief, that there cannot be such a constitutional difference between the ewes of Romney Marsh and those of Lincolnshire, Leicestershire, and elsewhere. A hint or two may be suggested as to the tenderness or danger of those ewes. It appears that the pastures in Romney Marsh are much exposed, and large; the breeding flocks being also large, and shelters and conveniences not provided, they lamb them as late as April, and the beginning of May. In forward and warm springs they must of course be subject to loss, if *high condition* increase the danger; and likewise by not regularly seeing and easily finding them in the night. It seems, therefore, advisable, after duly considering whether a successful experience, so long continued, be not more probable than the fact above stated, that the flock-masters in Romney Marsh should provide shelter and lamb earlier.

Concerning the disease called the garget, a few words may be added. On the third morning, after a bad case, (*that has been taken in time,*) if the ewe be very dull, and take no notice of her lamb, she is in great danger. Supposing the hurt to be external, and she has been handled and

dressed as before directed, let her now be examined; and if much swelling appear with blackness, she is mortifying. A *certain smell* accompanies this disease at all times. In this situation, take sweet oil nearly scalding hot, and anoint the parts with a feather: if any thing will stop a garget, this will. But if, when examined, the parts appear rather shrunk and flabby, and a bloody sanies be discharged, the disease has taken place within, and to stop it is impossible.

On the subject of castration, there is, perhaps, nothing of importance to observe. Some persons castrate none until the lambing season be finished; others castrate them, in succession, from six to ten days old. The author always followed the latter practice, and he never lost one. The precautions he thought necessary, were to pen the ewes and lambs, for the convenience of catching the latter without running them, putting every one, as they were cut, outside the pen, that they might not be disturbed in catching the rest; then let the ewes out to them, and leave them for the night. Some make it a rule to perform this operation on a fine day, but this is only for the comfort of the operator; and some shut them in a hovel for a night after the operation is performed. This may be very likely to do more harm than good: cold will not hurt them. Lastly, it is a vulgar error that they should be *raised up* (and some say, *well*

stirred about) the next day. The only reason for raising them up is to see if any one goes stiff, or *trails one leg*: if this be observed, let it be caught, and the parts separated and dressed with the oils recommended before. Considerable losses have been sustained by this operation; but, perhaps, they are not common, nor much feared.—The author believes, that, by the foregoing precautions, there would not be one die in a thousand.

NOTE, p. 21.

ON some parts of this essay there will be different opinions ; and while it was in hand, several letters reached the author, indicating the existence of notions that will not be changed at once. It is hoped that, by reflecting and comparing, and by *trying* the practice recommended, useful results will be produced.

There is a striking agreement in the observations contained in the letters above-mentioned. In all the statements, the greater loss proceeded from *no ascertained cause*, and happened to ewes that had *not been assisted*, as much as to those that had ; it shewed itself by *afterpains* coming on a day or two after lambing : all this is perfectly agreeable to our own experience, and is precisely what we expect will be obviated by *early assistance*, and especially to young ewes ; to those forward in condition also, and in warm and early seasons.

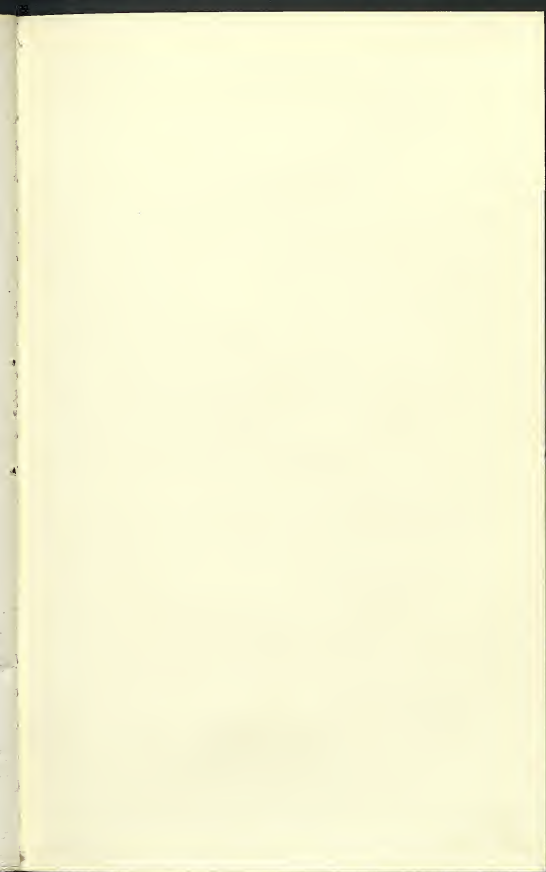
The letter of one correspondent may be more particularly noticed, because it contains numerous directions. He recommends *plenty of gruel*, or *flax-seed tea*, to be given to the ewes that have had severe labour. As such ewes must remain sheltered a day or two, if the weather be cold, this hint deserves attention; their situation may incline them to fever, and they at any rate want nourishment; some liquid food, and that not cold, may be proper. But when he adds, in cases of great weakness *bark* should be given, and *opium* and *castor oil* in other cases, he goes too far into trouble and expence. We cannot propagate the *judgment* by which such a practice should be directed; and its utility is at least doubtful.

This gentleman calls our *garget*, the *murrain*, which is a matter entirely new to us.—It seems, that the disease called the *murrain* (in some places) is the same with *quarter-ill*, or *black-leg*, in young cattle; and with *garget*, or *gargass*, in sheep; and that it would be defined to be—*a local gangrene, proceeding from internal inflammation*. But when this happens exteriorly, where there has been considerable hurt, and the putrescent appearance, the factor and rapidity of the disease are the same,—it should make us pause at least, to consider whether the *internal inflammation* might not proceed from hurt, occasioned by the paining of the ewe?—This, at least, may be

affirmed, that if timely assistance be rendered, the disease will always occur, when it does occur, exteriorly; excepting only in cases where the hand has been far introduced and long employed; for then it sometimes comes on by *afterpains* from internal hurt, which exactly corroborates the former reasoning.

It is observed also by the same correspondent, that the disease is wonderfully *infectious*: this we have noticed as a persuasion prevalent among shepherds. We know, certainly, that contact with gangrenous matter will infect a part exco-riated,—and, therefore, the hands of the shepherd should be kept from the touch of the ewes that die in this manner; but to suppose that the disease is to be *caught* by the same means as the scab, or, amongst human subjects, eruptive fevers, derives no probability from the known laws of contagion.

THE END.



SOUTHAMPTON UNIVERSITY LIBRARY

Date of Issue

--	--	--	--





